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NEWS	5	Oct 27	Patent Assignee Code Dictionary now available in Derwent Patent Files
NEWS	6	Oct 27	Plasdoc Key Serials Dictionary and Echoing added to Derwent Subscriber Files WPIDS and WPIX
NEWS	7	Nov 29	Derwent announces further increase in updates for DWPI
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=> s ribozyme and (nematode or elegans)

L1          221 RIBOZYME AND (NEMATODE OR ELEGANS)

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=> s l1 (p) (nematode or elegans)

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FIELD CODE - 'AND' OPERATOR ASSUMED 'L1 (P) '
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FIELD CODE - 'AND' OPERATOR ASSUMED 'L2 (P) '
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PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'L5 (P) '
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FIELD CODE - 'AND' OPERATOR ASSUMED 'L6 (P) '
L3          221 L1 (P) (NEMATODE OR ELEGANS)

=> s ribozyme (p) (nematode or elegans)

L4            9 RIBOZYME (P) (NEMATODE OR ELEGANS)

=> d l4 ibib abs tot


L4   ANSWER 1 OF 9  CAPLUS  COPYRIGHT 2001 ACS
ACCESSION NUMBER:          1993:142304  CAPLUS
DOCUMENT NUMBER:           118:142304
TITLE:                     Ribozymes for specific inhibition of mRNA function in
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the nematode Caenorhabditis elegans
AUTHOR(S): Kawahara, Tetsushi; Ohshima, Yasumi
CORPORATE SOURCE: Fac. Sci., Kyushu Univ., Fukuoka 812, Japan
SOURCE: Nucleic Acids Symp. Ser. (1992), 27(Nineteenth Symposium on Nucleic Acids Chemistry, 1992), 45-6
CODEN: NACSD8; ISSN: 0261-3166
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Nine different hammerhead ribozymes were designed for three specific sites of gene unc-22-encoded mRNA in C. elegans, which carry the common catalytic core and 12, 16 or 20 flanking nucleotides for base pairing with the mRNA, and tested for cleavage of short substrate RNA in vitro. All the ribozymes cleaved the substrate RNA catalytically at 37.degree. and the activities at 37.degree. were higher for all the ribozymes than those at 20.degree., the nematode growth temp. Plasmids carrying each of a few different promoters and lacZ reporter gene were prepd. and tested in the nematode as a test of vectors for the expression of ribozymes in vivo.

L4 ANSWER 2 OF 9 LIFESCI COPYRIGHT 2001 CSA
ACCESSION NUMBER: 95:106212 LIFESCI
TITLE: Dynamic RNA-RNA interactions in the spliceosome
AUTHOR: Madhani, H.D.; Guthrie, C.
CORPORATE SOURCE: Dep. Biochem. Biophys., Univ. California at San Francisco, San Francisco, CA 94143-0448, USA
SOURCE: ANNU. REV. GENET., (1994) vol. 28, pp. 1-26. ISSN: 0066-4197.
DOCUMENT TYPE: Journal
TREATMENT CODE: General Review
FILE SEGMENT: N
LANGUAGE: English

AB Genes in eukaryotes are often interrupted by intervening sequences that must be removed during gene expression. RNA splicing is the process by which these intervening sequences (introns) are precisely removed and the flanking, functional sequences (exons) are joined together. Splicing proceeds via two transesterification steps. In the first cleavage-ligation step of this reaction, the 2' hydroxyl of an internal adenosine residue attacks the phosphate at the 5' splice site, releasing the 5' exon and resulting in formation of a branched molecule, the lariat intermediate. This intermediate contains an unusual 5'-2' phosphodiester bond between the 5' end of the intron and the internal adenosine (the branchpoint adenosine). During the second cleavage-ligation step, the 3' hydroxyl of the 5' exon attacks the phosphate at the 3' splice site. This results in the ligation of the two exons and the release of the intron in lariat form. Splicing occurs in a large and dynamic ribonucleoprotein complex, the spliceosome. Five small nuclear RNAs (U1, U2, U4, U5, and U6 snRNAs) constitute key components of this machine. Packaged by proteins into ribonucleoproteins (snRNPs), these snRNAs assemble onto the pre-mRNA substrate in an ordered, step-wise fashion. A conspicuous feature of this conserved assembly pathway is that many steps require the hydrolysis of ATP. The discovery of RNA catalysis led to early speculation that nuclear pre-mRNA splicing might be a fundamentally RNA-catalyzed process mediated by the spliceosomal snRNAs. This hypothesis was galvanized by the observation that Group II self-splicing introns are removed by a two-step chemical pathway that is highly similar if not identical to that which accomplishes nuclear pre-mRNA splicing. The notion that the spliceosome is an RNA enzyme, or **ribozyme**, requires the existence of spliceosomal active site structures composed of snRNA and pre-mRNA sequences. By this model, the ATP-dependent spliceosome assembly pathway would function to build these active sites and simultaneously juxtapose catalytic groups with their respective substrates for the two chemical steps of the splicing reaction. Evidence supporting this view of the spliceosome as a **ribozyme** has begun to emerge. Through the

combined application of powerful genetic and biochemical approaches in yeast, **nematode**, and vertebrate systems, a number of RNA-RNA interactions involving the snRNAs and the pre-mRNA have been identified. This has led to an explicit model for active site architecture in the spliceosome in which the reaction partners for the two transesterification reactions of splicing are brought together through a network of RNA-RNA interactions. Unexpectedly, these interactions require that several preexisting snRNA structures be rearranged as the spliceosome is built. Presumably, this dynamism requires the participation of factors that mediate the disruption of one set of RNA-RNA interactions and the formation and stabilization of another. There are now hints that members of a family of RNA-dependent ATPases might be involved in such conformational isomerizations in the spliceosome. Finally, potential analogs of many of the spliceosomal RNA structures can be found in Group II introns, raising the possibility that splicing in the two systems is accomplished through fundamentally equivalent active sites. However, unlike the prefabricated, "hard-wired" catalytic architecture of Group II introns, the dynamic ATP-driven formation of active site structure in the spliceosome offers multiple opportunities for the regulation of splice site choice and splicing efficiency. We focus here on RNA structural aspects of splicing, emphasizing the dynamic properties of the spliceosomal apparatus.

L4 ANSWER 3 OF 9 USPATFULL

ACCESSION NUMBER:	2001:4538 USPATFULL
TITLE:	Calreticulin genes and promoter regions and uses thereof
INVENTOR(S):	Coughlan, Sean J., Des Moines, IA, United States Winfrey, Jr., Ron J., Johnston, IA, United States
PATENT ASSIGNEE(S):	Pioneer Hi-Bred International, Inc., Johnston, IA, United States (U.S. corporation)

	NUMBER	DATE	
PATENT INFORMATION:	US 6171864	20010109	
APPLICATION INFO.:	US 1996-675816	19960705	(8)
DOCUMENT TYPE:	Patent		
PRIMARY EXAMINER:	Kemmerer, Elizabeth		
LEGAL REPRESENTATIVE:	Seed IP Law Group PLLC		
NUMBER OF CLAIMS:	19		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	25 Drawing Figure(s); 21 Drawing Page(s)		
LINE COUNT:	1311		

AB Isolated nucleic acid molecules are provided which encode calreticulin and calnexin. Also provided are vectors which are capable of expressing such nucleic acid molecules, host cells which contain such vectors, and polypeptides encoded by the afore-mentioned nucleic acids. In addition, nucleic acid molecules are provided which comprise calreticulin or calnexin promoters.

L4 ANSWER 4 OF 9 USPATFULL

ACCESSION NUMBER:	2000:95109 USPATFULL
TITLE:	Nematode-induced genes in tomato
INVENTOR(S):	Bird, David McK., Riverside, CA, United States Wilson, Mark A., Moreno Valley, CA, United States
PATENT ASSIGNEE(S):	The Regents of the University of California, Oakland, CA, United States (U.S. corporation)

	NUMBER	DATE	
PATENT INFORMATION:	US 6093810	20000725	
APPLICATION INFO.:	US 1996-756849	19961126	(8)
RELATED APPLN. INFO.:	Division of Ser. No. US 1994-248474, filed on 25 May 1994, now patented, Pat. No. US 5612471		

DOCUMENT TYPE: Utility
PRIMARY EXAMINER: Campell, Bruce R.
LEGAL REPRESENTATIVE: Townsend and Townsend and Crew
NUMBER OF CLAIMS: 11
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 4 Drawing Figure(s); 3 Drawing Page(s)
LINE COUNT: 3013
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention provides nucleic sequences from genes which are preferentially expressed in feeding site cells. These sequences can be used to produce transgenic plants resistant to nematode infection.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 5 OF 9 USPATFULL
ACCESSION NUMBER: 1999:170828 USPATFULL
TITLE: Nematode-resistant transgenic plants
INVENTOR(S): Conkling, Mark A., Fuquay-Varina, NC, United States
Opperman, Charles H., Raleigh, NC, United States
Acedo, Gregoria N., Durham, NC, United States
Song, Wen, Raleigh, NC, United States
PATENT ASSIGNEE(S): North Carolina State University, Raleigh, NC, United States (U.S. corporation)

	NUMBER	DATE
PATENT INFORMATION:	US 6008436	19991228
APPLICATION INFO.:	US 1996-654025	19960523 (8)

RELATED APPLN. INFO.: Continuation of Ser. No. US 1994-332658, filed on 1 Nov
1994, now abandoned which is a continuation of Ser. No.
US 1993-7998, filed on 21 Jan 1993, now abandoned
DOCUMENT TYPE: Utility
PRIMARY EXAMINER: Robinson, Douglas W.
ASSISTANT EXAMINER: Haas, Thomas
LEGAL REPRESENTATIVE: Myers Bigel Sibley & Sajovec
NUMBER OF CLAIMS: 53
EXEMPLARY CLAIM: 28
NUMBER OF DRAWINGS: 1 Drawing Figure(s); 1 Drawing Page(s)
LINE COUNT: 1451
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Nematode-resistant transgenic plants are disclosed. The plants comprise plant cells containing a DNA construct comprising a transcription cassette, which construct comprises, in the 5' to 3' direction, a promoter operable in the plant cells, and a DNA comprising at least a portion of a DNA sequence encoding a nematode-inducible transmembrane pore protein in either the sense or antisense orientation. Intermediates for producing the same along with methods of making and using the same are also disclosed. In an alternate embodiment of the invention, the sense or antisense DNA is replaced with a DNA encoding an enzymatic RNA molecule directed against the mRNA transcript of a DNA sequence encoding a nematode-inducible transmembrane pore protein.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 6 OF 9 USPATFULL
ACCESSION NUMBER: 1999:166569 USPATFULL
TITLE: Methods of cancer diagnosis and therapy targeted against the cancer stemline
INVENTOR(S): Bergstein, Ivan, 435 E. 70th St., Apt 28-L, New York, NY, United States 10021

	NUMBER	DATE

	NUMBER	DATE	
PATENT INFORMATION:	US 6004528	19991221	
APPLICATION INFO.:	US 1997-933330	19970918	(8)

DOCUMENT TYPE: Utility
PRIMARY EXAMINER: Hutzell, Paula K.
ASSISTANT EXAMINER: Bansal, Geetha P.
LEGAL REPRESENTATIVE: Burns, Doane, Swecker & Mathis, LLP
NUMBER OF CLAIMS: 14
EXEMPLARY CLAIM: 1,10
NUMBER OF DRAWINGS: 11 Drawing Figure(s); 6 Drawing Page(s)
LINE COUNT: 3572
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Improved methods for the diagnosis and treatment of cancer which involve the targeting of slow-growing, relatively mutationally-spared cancer stemline are provided. These methods are an improvement over previous cancer detection and therapeutic methods because they provide for very early cancer detection and treatment and reduce the likelihood of clinical relapse after treatment.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 7 OF 9 USPATFULL
ACCESSION NUMBER: 1998:98794 USPATFULL
TITLE: Filariid nematode cysteine protease proteins, nucleic acid molecules and uses thereof
INVENTOR(S): Tripp, Cynthia Ann, Fort Collins, CO, United States
Wisnewski, Nancy, Fort Collins, CO, United States
Grieve, Robert B., Fort Collins, CO, United States
Frank, Glenn R., Wellington, CO, United States
PATENT ASSIGNEE(S): Heska Corporation, Fort Collins, CO, United States (U.S. corporation)
Colorado State University Research Foundation, Fort Collins, CO, United States (U.S. corporation)

	NUMBER	DATE	
PATENT INFORMATION:	US 5795768	19980818	
APPLICATION INFO.:	US 1995-486036	19950607	(8)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1993-153554, filed on 16 Nov 1993, now abandoned And Ser. No. US 1993-101283, filed on 3 Aug 1993, now abandoned which is a continuation of Ser. No. US 1991-654226, filed on 12 Feb 1991, now abandoned , said Ser. No. US 153554 which is a continuation of Ser. No. US 1991-792209, filed on 12 Nov 1991, now abandoned
DOCUMENT TYPE: Utility
PRIMARY EXAMINER: Sisson, Bradley L.
LEGAL REPRESENTATIVE: Heska CorporationColorado State University Research Foundation
NUMBER OF CLAIMS: 9
EXEMPLARY CLAIM: 1
LINE COUNT: 1869
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides for filariid nematode cysteine protease proteins; to filariid nematode cysteine protease nucleic acid molecules, in particular, Dirofilaria immitis L3 larval cysteine protease nucleic acid molecules and Onchocerca volvulus L3 larval cysteine protease nucleic acid molecules; to antibodies raised against such proteins, and to compounds that inhibit filariid nematode cysteine protease activity. The present invention also includes methods to obtain such proteins, nucleic acid molecules, antibodies and/or inhibitors. The present invention also includes therapeutic compositions comprising such proteins, nucleic acid molecules, antibodies and/or inhibitors, and the use of such compositions to protect an animal from disease caused by

parasitic helminths.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 8 OF 9 USPATFULL

ACCESSION NUMBER: 1998:95401 USPATFULL
TITLE: Dirofilaria and onchocerca larval L3 cysteine protease proteins and uses thereof
INVENTOR(S): Tripp, Cynthia Ann, Fort Collins, CO, United States
Wisnewski, Nancy, Fort Collins, CO, United States
Grieve, Robert B., Fort Collins, CO, United States
Frank, Glenn R., Wellington, CO, United States
Richer, Jennifer K., Denver, CO, United States
PATENT ASSIGNEE(S): Heska Corporation, Fort Collins, CO, United States (U.S. corporation)
Colorado State University Research Foundation, Fort Collins, CO, United States (U.S. corporation)

	NUMBER	DATE	
PATENT INFORMATION:	US 5792624	19980811	
APPLICATION INFO.:	US 1995-482282	19950607	(8)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1993-153554, filed on 16 Nov 1993, now abandoned And Ser. No. US 1993-101283, filed on 3 Aug 1993, now abandoned which is a continuation of Ser. No. US 1991-654226, filed on 12 Feb 1991, now abandoned , said Ser. No. US 153554 which is a continuation of Ser. No. US 1991-792209, filed on 12 Nov 1991, now abandoned
DOCUMENT TYPE: Utility
PRIMARY EXAMINER: Sisson, Bradley L.
LEGAL REPRESENTATIVE: Heska CorporationColorado State University Research Foundation
NUMBER OF CLAIMS: 5
EXEMPLARY CLAIM: 1
LINE COUNT: 1838
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides for filariid nematode cysteine protease proteins; to filariid nematode cysteine protease nucleic acid molecules,
in particular, Dirofilaria immitis L3 larval cysteine protease nucleic acid molecules and Onchocerca volvulus L3 larval cysteine protease nucleic acid molecules; to antibodies raised against such proteins, and to compounds that inhibit filariid nematode cysteine protease activity. The present invention also includes methods to obtain such proteins, nucleic acid molecules, antibodies and/or inhibitors. The present invention also includes therapeutic compositions comprising such proteins, nucleic acid molecules, antibodies and/or inhibitors, and the use of such compositions to protect an animal from disease caused by parasitic helminths.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 9 OF 9 USPATFULL

ACCESSION NUMBER: 97:22911 USPATFULL
TITLE: Nematode-induced genes in tomato
INVENTOR(S): Bird, David McK., Riverside, CA, United States
Wilson, Mark A., Moreno Valley, CA, United States
PATENT ASSIGNEE(S): The Regents of the University of California, Oakland, CA, United States (U.S. corporation)

	NUMBER	DATE	
PATENT INFORMATION:	US 5612471	19970318	
APPLICATION INFO.:	US 1994-248474	19940525	(8)

DOCUMENT TYPE: Utility

PRIMARY EXAMINER: Chereskin, Che S.
LEGAL REPRESENTATIVE: Townsend and Townsend and Crew
NUMBER OF CLAIMS: 1
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 4 Drawing Figure(s); 3 Drawing Page(s)
LINE COUNT: 1722
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention provides nucleic sequences from genes which are preferentially expressed in feeding site cells. These sequences can be used to produce transgenic plants resistant to nematode infection.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> d l4 ibib kwic tot

L4 ANSWER 1 OF 9 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1993:142304 CAPLUS
DOCUMENT NUMBER: 118:142304
TITLE: Ribozymes for specific inhibition of mRNA function in the nematode Caenorhabditis elegans
AUTHOR(S): Kawahara, Tetsushi; Ohshima, Yasumi
CORPORATE SOURCE: Fac. Sci., Kyushu Univ., Fukuoka, 812, Japan
SOURCE: Nucleic Acids Symp. Ser. (1992), 27(Nineteenth Symposium on Nucleic Acids Chemistry, 1992), 45-6
CODEN: NACSD8; ISSN: 0261-3166
DOCUMENT TYPE: Journal
LANGUAGE: English
ST Caenorhabditis mRNA specific hammerhead **ribozyme** design; **nematode** mRNA specific **ribozyme** vector plasmid
IT Plasmid and Episome
(reporter, for use as vector for insertion of **ribozyme** gene into **nematode**, design and testing of)

L4 ANSWER 2 OF 9 LIFESCI COPYRIGHT 2001 CSA
ACCESSION NUMBER: 95:106212 LIFESCI
TITLE: Dynamic RNA-RNA interactions in the spliceosome
AUTHOR: Madhani, H.D.; Guthrie, C.
CORPORATE SOURCE: Dep. Biochem. Biophys., Univ. California at San Francisco, San Francisco, CA 94143-0448, USA
SOURCE: ANNU. REV. GENET., (1994) vol. 28, pp. 1-26.
ISSN: 0066-4197.
DOCUMENT TYPE: Journal
TREATMENT CODE: General Review
FILE SEGMENT: N
LANGUAGE: English
AB . . . if not identical to that which accomplishes nuclear pre-mRNA splicing. The notion that the spliceosome is an RNA enzyme, or **ribozyme**, requires the existence of spliceosomal active site structures composed of snRNA and pre-mRNA sequences. By this model, the ATP-dependent spliceosome. . . respective substrates for the two chemical steps of the splicing reaction. Evidence supporting this view of the spliceosome as a **ribozyme** has begun to emerge. Through the combined application of powerful genetic and biochemical approaches in yeast, **nematode**, and vertebrate systems, a number of RNA-RNA interactions involving the snRNAs and the pre-mRNA have been identified. This has led. . .

L4 ANSWER 3 OF 9 USPATFULL
ACCESSION NUMBER: 2001:4538 USPATFULL
TITLE: Calreticulin genes and promoter regions and uses thereof
INVENTOR(S): Coughlan, Sean J., Des Moines, IA, United States
Winfrey, Jr., Ron J., Johnston, IA, United States
PATENT ASSIGNEE(S): Pioneer Hi-Bred International, Inc., Johnston, IA,

United States (U.S. corporation)

	NUMBER	DATE	
PATENT INFORMATION:	US 6171864	20010109	
APPLICATION INFO.:	US 1996-675816	19960705	(8)

DOCUMENT TYPE: Patent
PRIMARY EXAMINER: Kemmerer, Elizabeth
LEGAL REPRESENTATIVE: Seed IP Law Group PLLC
NUMBER OF CLAIMS: 19
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 25 Drawing Figure(s); 21 Drawing Page(s)
LINE COUNT: 1311
SUMM . . . gene operably linked to said promoter. Representative examples of such foreign genes include genes which encode proteins, antisense genes and **ribozyme** genes. Within one embodiment the foreign gene confers resistance to a disease selected from the group consisting of Sclerotinia, sunflower head moth, canola flea beetle and soybean cyst **nematode**. Within other related aspects, host cells containing one of the above-described vectors are provided. Representative examples of suitable host cells. . .

L4 ANSWER 4 OF 9 USPATFULL
ACCESSION NUMBER: 2000:95109 USPATFULL
TITLE: Nematode-induced genes in tomato
INVENTOR(S): Bird, David McK., Riverside, CA, United States
Wilson, Mark A., Moreno Valley, CA, United States
PATENT ASSIGNEE(S): The Regents of the University of California, Oakland, CA, United States (U.S. corporation)

	NUMBER	DATE	
PATENT INFORMATION:	US 6093810	20000725	
APPLICATION INFO.:	US 1996-756849	19961126	(8)

RELATED APPLN. INFO.: Division of Ser. No. US 1994-248474, filed on 25 May 1994, now patented, Pat. No. US 5612471
DOCUMENT TYPE: Utility
PRIMARY EXAMINER: Campell, Bruce R.
LEGAL REPRESENTATIVE: Townsend and Townsend and Crew LLP
NUMBER OF CLAIMS: 11
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 4 Drawing Figure(s); 3 Drawing Page(s)
LINE COUNT: 3013
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
SUMM The expression cassettes may also comprise the **nematode**-responsive promoter operably linked to polynucleotide which inhibits expression of a **nematode**-induced gene. In these embodiments, the polynucleotide is typically linked to the promoter in an antisense orientation. The polynucleotide can also be used to transcribe a **ribozyme**.

L4 ANSWER 5 OF 9 USPATFULL
ACCESSION NUMBER: 1999:170828 USPATFULL
TITLE: Nematode-resistant transgenic plants
INVENTOR(S): Conkling, Mark A., Fuquay-Varina, NC, United States
Opperman, Charles H., Raleigh, NC, United States
Acedo, Gregoria N., Durham, NC, United States
Song, Wen, Raleigh, NC, United States
PATENT ASSIGNEE(S): North Carolina State University, Raleigh, NC, United States (U.S. corporation)

	NUMBER	DATE
PATENT INFORMATION:	US 6008436	19991228

APPLICATION INFO.: US 1996-654025 19960523 (8)
RELATED APPLN. INFO.: Continuation of Ser. No. US 1994-332658, filed on 1 Nov
1994, now abandoned which is a continuation of Ser. No.
US 1993-7998, filed on 21 Jan 1993, now abandoned
DOCUMENT TYPE: Utility
PRIMARY EXAMINER: Robinson, Douglas W.
ASSISTANT EXAMINER: Haas, Thomas
LEGAL REPRESENTATIVE: Myers Bigel Sibley & Sajovec
NUMBER OF CLAIMS: 53
EXEMPLARY CLAIM: 28
NUMBER OF DRAWINGS: 1 Drawing Figure(s); 1 Drawing Page(s)
LINE COUNT: 1451
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
DETD . . . the sense or antisense DNA in the construct is replaced with a DNA encoding an enzymatic RNA molecule (i.e., a "**ribozyme**"), which enzymatic RNA molecule is directed against (i.e., cleaves) the mRNA transcript of a DNA encoding a **nematode**-inducible transmembrane pore protein as described hereinabove. DNA encoding enzymatic RNA molecules may be produced in accordance with known techniques. See,. . .

L4 ANSWER 6 OF 9 USPATFULL
ACCESSION NUMBER: 1999:166569 USPATFULL
TITLE: Methods of cancer diagnosis and therapy targeted against the cancer stemline
INVENTOR(S): Bergstein, Ivan, 435 E. 70th St., Apt 28-L, New York, NY, United States 10021

	NUMBER	DATE
PATENT INFORMATION:	US 6004528	19991221
APPLICATION INFO.:	US 1997-933330	19970918 (8)

DOCUMENT TYPE: Utility
PRIMARY EXAMINER: Hutzell, Paula K.
ASSISTANT EXAMINER: Bansal, Geetha P.
LEGAL REPRESENTATIVE: Burns, Doane, Swecker & Mathis, LLP
NUMBER OF CLAIMS: 14
EXEMPLARY CLAIM: 1,10
NUMBER OF DRAWINGS: 11 Drawing Figure(s); 6 Drawing Page(s)
LINE COUNT: 3572
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
DETD . . . appears to be related to a gene (par-1) in nematodes which is known to affect the asymmetric action of another **nematode** factor (SKN-1) which itself is related to the yeast HO-inhibiting factor (Ash-1p). Thus, assuming the likely existence of a conserved. . . Kp78/par-1, SKN-1, HO), or block negatively-acting factors (e.g. Ash-1p) by the methods of gene therapy and gene-inhibitor (e.g. antisense and **ribozyme**) therapy described in this and previous subsections. It should also be noted that those factors (mentioned in the previous sentence). . .

L4 ANSWER 7 OF 9 USPATFULL
ACCESSION NUMBER: 1998:98794 USPATFULL
TITLE: Filariid nematode cysteine protease proteins, nucleic acid molecules and uses thereof
INVENTOR(S): Tripp, Cynthia Ann, Fort Collins, CO, United States
Wisnewski, Nancy, Fort Collins, CO, United States
Grieve, Robert B., Fort Collins, CO, United States
Frank, Glenn R., Wellington, CO, United States
PATENT ASSIGNEE(S): Heska Corporation, Fort Collins, CO, United States (U.S. corporation)
Colorado State University Research Foundation, Fort

Collins, CO, United States (U.S. corporation)

	NUMBER	DATE
PATENT INFORMATION:	US 5795768	19980818
APPLICATION INFO.:	US 1995-486036	19950607 (8)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1993-153554, filed on 16 Nov 1993, now abandoned And Ser. No. US 1993-101283, filed on 3 Aug 1993, now abandoned which is a continuation of Ser. No. US 1991-654226, filed on 12 Feb 1991, now abandoned , said Ser. No. US 153554 which is a continuation of Ser. No. US 1991-792209, filed on 12 Nov 1991, now abandoned

DOCUMENT TYPE: Utility
PRIMARY EXAMINER: Sisson, Bradley L.
LEGAL REPRESENTATIVE: Heska CorporationColorado State University Research Foundation

NUMBER OF CLAIMS: 9
EXEMPLARY CLAIM: 1
LINE COUNT: 1869
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

DETD . . . conditions, with complementary regions of other, preferably longer, nucleic acid molecules of the present invention such as those comprising filariid **nematode** CP genes or other filariid **nematode** CP nucleic acid molecules. Oligonucleotides of the present invention can be RNA, DNA, or derivatives of either. The minimal size. . . CP protein production or activity. Such therapeutic applications include the use of such oligonucleotides in, for example, antisense-, triplex formation-, **ribozyme**- and/or RNA drug-based technologies. The present invention, therefore, includes such oligonucleotides and methods to protect animals from disease caused by. . .

L4 ANSWER 8 OF 9 USPATFULL

ACCESSION NUMBER: 1998:95401 USPATFULL
TITLE: Dirofilaria and onchocerca larval L3 cysteine protease proteins and uses thereof
INVENTOR(S): Tripp, Cynthia Ann, Fort Collins, CO, United States
Wisnewski, Nancy, Fort Collins, CO, United States
Grieve, Robert B., Fort Collins, CO, United States
Frank, Glenn R., Wellington, CO, United States
Richer, Jennifer K., Denver, CO, United States
PATENT ASSIGNEE(S): Heska Corporation, Fort Collins, CO, United States (U.S. corporation)
Colorado State University Research Foundation, Fort Collins, CO, United States (U.S. corporation)

	NUMBER	DATE
PATENT INFORMATION:	US 5792624	19980811
APPLICATION INFO.:	US 1995-482282	19950607 (8)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1993-153554, filed on 16 Nov 1993, now abandoned And Ser. No. US 1993-101283, filed on 3 Aug 1993, now abandoned which is a continuation of Ser. No. US 1991-654226, filed on 12 Feb 1991, now abandoned , said Ser. No. US 153554 which is a continuation of Ser. No. US 1991-792209, filed on 12 Nov 1991, now abandoned

DOCUMENT TYPE: Utility
PRIMARY EXAMINER: Sisson, Bradley L.
LEGAL REPRESENTATIVE: Heska CorporationColorado State University Research Foundation

NUMBER OF CLAIMS: 5
EXEMPLARY CLAIM: 1

LINE COUNT: 1838
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
SUMM . . . conditions, with complementary regions to other, preferably longer, nucleic acid molecules of the present invention such as those comprising filariid **nematode** CP genes or other filariid **nematode** CP nucleic acid molecules. Oligonucleotides of the present invention can be RNA, DNA, or derivatives of either. The minimal size. . . CP protein production or activity. Such therapeutic applications include the use of such oligonucleotides in, for example, antisense-, triplex formation-, **ribozyme**- and/or RNA drug-based technologies. The present invention, therefore, includes such oligonucleotides and methods to protect animals from disease caused by. . .

L4 ANSWER 9 OF 9 USPATFULL

ACCESSION NUMBER:	97:22911 USPATFULL	
TITLE:	Nematode-induced genes in tomato	
INVENTOR(S):	Bird, David McK., Riverside, CA, United States Wilson, Mark A., Moreno Valley, CA, United States	
PATENT ASSIGNEE(S):	The Regents of the University of California, Oakland, CA, United States (U.S. corporation)	
	NUMBER	DATE
PATENT INFORMATION:	US 5612471	19970318
APPLICATION INFO.:	US 1994-248474	19940525 (8)
DOCUMENT TYPE:	Utility	
PRIMARY EXAMINER:	Chereskin, Che S.	
LEGAL REPRESENTATIVE:	Townsend and Townsend and Crew	
NUMBER OF CLAIMS:	1	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	4 Drawing Figure(s); 3 Drawing Page(s)	
LINE COUNT:	1722	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
SUMM The expression cassettes may also comprise the **nematode**-responsive promoter operably linked to polynucleotide which inhibits expression of a **nematode**-induced gene. In these embodiments, the polynucleotide is typically linked to the promoter in an antisense orientation. The polynucleotide can also be used to transcribe a **ribozyme**.

that we propose is essential for establishing the path of the cleavage furrow at cytokinesis. Last, **dsRNA**-mediated mRNA degradation is not restricted to alpha-tubulin mRNA but can be applied to other cellular mRNAs, thus establishing a powerful tool to genetically manipulate these important protozoan parasites.

L2 ANSWER 11 OF 13 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1998:465069 CAPLUS
DOCUMENT NUMBER: 129:184695
TITLE: **Double-stranded RNA** as a mediator in sequence-specific genetic silencing and co-suppression
AUTHOR(S): Montgomery, Mary K.; Fire, Andrew
CORPORATE SOURCE: Dep. Embryology, Carnegie Inst. Washington, Baltimore, MD, 21210, USA
SOURCE: Trends Genet. (1998), 14(7), 255-258
CODEN: TRGEE2; ISSN: 0168-9525
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review and discussion with 24 refs. on the possibility that **double-stranded RNA** (**dsRNA**), rather than sense or antisense single-stranded RNAs alone, is the effector mol. responsible for RNA-mediated silencing and co-suppression. Topics include: RNA-mediated genetic interference in nematode; RNA-mediated silencing and co-suppression in plants; possible mechanisms for RNA-mediated interference; and RNA-mediated interference mechanisms in organisms other than nematodes and plants.

L2 ANSWER 12 OF 13 USPATFULL
ACCESSION NUMBER: 97:81131 USPATFULL
TITLE: Invertase genes and uses thereof
INVENTOR(S): Fitzmaurice, Leona C., San Diego, CA, United States
Mirkov, T. Erik, San Diego, CA, United States
Elliott, Kathryn J., San Diego, CA, United States
Butler, William Owen, San Diego, CA, United States
Konno, Yoshihiro, Onishi, Japan
Dickinson, Craig Duane, San Diego, CA, United States
PATENT ASSIGNEE(S): The Salk Institute Biotechnology/Industrial Associates, Inc., San Diego, CA, United States (U.S. corporation)

	NUMBER	DATE
PATENT INFORMATION:	US 5665579	19970909
APPLICATION INFO.:	US 1994-245809	19940517 (8)

RELATED APPLN. INFO.: Continuation of Ser. No. US 1991-771331, filed on 4 Oct 1991, now abandoned which is a continuation-in-part of Ser. No. US 1991-660344, filed on 22 Feb 1991, now abandoned
DOCUMENT TYPE: Utility
PRIMARY EXAMINER: Fox, David T.
ASSISTANT EXAMINER: McElwain, Elizabeth F.
LEGAL REPRESENTATIVE: Burns, Doane, Swecker & Mathis, L.L.P.
NUMBER OF CLAIMS: 17
EXEMPLARY CLAIM: 17
NUMBER OF DRAWINGS: 14 Drawing Figure(s); 8 Drawing Page(s)
LINE COUNT: 3565
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Transgenic plants that are modified to produce fruits that have altered levels of soluble solids compared to non-transgenic species of the same species are provided. The transgenic plants are modified by introduction of DNA constructs that encode invertase operatively linked to DNA

=> d ibib kwic l2 13

L2 ANSWER 13 OF 13 USPATFULL
ACCESSION NUMBER: 96:106598 USPATFULL
TITLE: Invertase gene(s) and uses thereof
INVENTOR(S): Butler, William O., San Diego, CA, United States
Konno, Yoshihiro, Gunma, Japan
Dickinson, Craig D., San Diego, CA, United States
Fitzmaurice, Leona C., San Diego, CA, United States
Mirkov, Theodore E., San Diego, CA, United States
Elliott, Kathryn J., San Diego, CA, United States
PATENT ASSIGNEE(S): The Salk Institute Biotechnology/Industrial Associates,
Inc., La Jolla, CA, United States (U.S. corporation)

	NUMBER	DATE	
PATENT INFORMATION:	US 5576428	19961119	
APPLICATION INFO.:	US 1993-107748	19930820	(8)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1991-771331, filed on 4 Oct 1991, now abandoned which is a continuation-in-part of Ser. No. US 1991-660344, filed on 22 Feb 1991, now abandoned
DOCUMENT TYPE: Utility
PRIMARY EXAMINER: Moody, Patricia R.
LEGAL REPRESENTATIVE: Burns, Doane, Swecker & Mathis, LLP
NUMBER OF CLAIMS: 13
EXEMPLARY CLAIM: 1
LINE COUNT: 2498
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
SUMM . . . DNA constructs that result in decreased expression of invertase
are provided. Reduced expression may be effected by methods such as **cosuppression** [for a discussion of **cosuppression** see Hooper, C. (1991) J. NIH Res. 3:49-54], by operatively linking a truncated form of a tomato fruit invertase gene to a promoter, or by expression of invertase antisense mRNA. Antisense RNA forms **double-stranded RNA** with the mRNA produced from the endogenous gene, thereby interfering with translation of the endogenous mRNA [see, e.g., Lichtenstein (1988). . .
DETD c. **Cosuppression** construct 35B/3-L1(P).
DETD A construct for use in **cosuppression** of endogenous invertase expression was constructed by removing a coding segment from 35S/3-L1 to
create a construct 35S/3-L1(P) which encodes. . .

=> d ibib kwic l2 12

L2 ANSWER 12 OF 13 USPATFULL
ACCESSION NUMBER: 97:81131 USPATFULL
TITLE: Invertase genes and uses thereof
INVENTOR(S): Fitzmaurice, Leona C., San Diego, CA, United States
Mirkov, T. Erik, San Diego, CA, United States
Elliott, Kathryn J., San Diego, CA, United States
Butler, William Owen, San Diego, CA, United States
Konno, Yoshihiro, Onishi, Japan
Dickinson, Craig Duane, San Diego, CA, United States
PATENT ASSIGNEE(S): The Salk Institute Biotechnology/Industrial Associates,
Inc., San Diego, CA, United States (U.S. corporation)

	NUMBER	DATE

encoding regulatory regions that direct transcription of the DNA encoding invertase and to DNA encoding sequences that direct proper processing of the invertase through the secretory pathways of the plant and targeting of the invertase to the vacuole.

In particular, DNA constructs encoding tomato plant vacuolar invertase in operative linkage with a developmentally regulated promoter region are provided. Preferred regulatory and structural DNA is obtained from genomic DNA clones and cDNA clones encoding tomato fruit vacuolar invertases from the commercial tomato plant, Lycopersicon esculentum, and wild tomato plant, Lycopersicon pimpinellifolium.

Probes derived from the genomic DNA and cDNA, antibodies specific for tomato fruit invertase, and uses therefore, are also provided.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L2 ANSWER 13 OF 13 USPATFULL

ACCESSION NUMBER:	96:106598 USPATFULL
TITLE:	Invertase gene(s) and uses thereof
INVENTOR(S):	Butler, William O., San Diego, CA, United States Konno, Yoshihiro, Gunma, Japan Dickinson, Craig D., San Diego, CA, United States Fitzmaurice, Leona C., San Diego, CA, United States Mirkov, Theodore E., San Diego, CA, United States Elliott, Kathryn J., San Diego, CA, United States
PATENT ASSIGNEE(S):	The Salk Institute Biotechnology/Industrial Associates, Inc., La Jolla, CA, United States (U.S. corporation)

	NUMBER	DATE
PATENT INFORMATION:	US 5576428	19961119
APPLICATION INFO.:	US 1993-107748	19930820 (8)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. US 1991-771331, filed on 4 Oct 1991, now abandoned which is a continuation-in-part of Ser. No. US 1991-660344, filed on 22 Feb 1991, now abandoned	
DOCUMENT TYPE:	Utility	
PRIMARY EXAMINER:	Moody, Patricia R.	
LEGAL REPRESENTATIVE:	Burns, Doane, Swecker & Mathis, LLP	
NUMBER OF CLAIMS:	13	
EXEMPLARY CLAIM:	1	
LINE COUNT:	2498	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Transgenic plants that are modified to produce fruits that have altered levels of soluble solids compared to non-transgenic plants of the same species are provided. The transgenic plants are prepared by introducing into plants DNA constructs that encode invertase operatively linked to DNA encoding regulatory regions that direct transcription of the DNA encoding invertase and operatively linked to DNA encoding amino acids that direct proper processing of the invertase through the secretory pathways of the plant and targeting of the invertase to the vacuole.

In particular, DNA constructs encoding tomato plant vacuolar invertase in operative linkage with a developmentally regulated promoter region are provided. Preferred regulatory and structural DNA is obtained from genomic DNA clones and cDNA clones encoding tomato fruit vacuolar invertases from the commercial tomato plant, Lycopersicon esculentum, and wild tomato plant, Lycopersicon pimpinellifolium.

Probes derived from the genomic DNA and cDNA, antibodies specific for tomato fruit invertase, and uses therefor, are also provided.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

PATENT INFORMATION:	US 5665579	19970909
APPLICATION INFO.:	US 1994-245809	19940517 (8)
RELATED APPLN. INFO.:	Continuation of Ser. No. US 1991-771331, filed on 4 Oct	
	1991, now abandoned which is a continuation-in-part of Ser. No. US 1991-660344, filed on 22 Feb 1991, now abandoned	
DOCUMENT TYPE:	Utility	
PRIMARY EXAMINER:	Fox, David T.	
ASSISTANT EXAMINER:	McElwain, Elizabeth F.	
LEGAL REPRESENTATIVE:	Burns, Doane, Swecker & Mathis, L.L.P.	
NUMBER OF CLAIMS:	17	
EXEMPLARY CLAIM:	17	
NUMBER OF DRAWINGS:	14 Drawing Figure(s); 8 Drawing Page(s)	
LINE COUNT:	3565	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

SUMM . . . of soluble solids in the fruit is reduced by preparing transgenic plants that express anti-sense invertase mRNA. Anti-sense RNA forms **double-stranded RNA** with the mRNA produced from the endogenous gene, thereby interfering with translation of the endogenous mRNA (see, e.g., Lichtenstein (1988). . .

DETD C. **Cosuppression** Construct 35S/3-L1(P)

DETD An alternative approach to reducing invertase production in plant cells is **cosuppression**.

```
=> s cosupression

L3            6 COSUPRESSION

=> s cosuppression

L4          357 COSUPPRESSION

=> s l4 and py<1998

   3 FILES SEARCHED...
   4 FILES SEARCHED...
L5          166 L4 AND PY<1998

=> dup rem l5

PROCESSING COMPLETED FOR L5
L6            90 DUP REM L5 (76 DUPLICATES REMOVED)

=> l6 and review

L6 IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> s l6 and review

L7            13 L6 AND REVIEW

=> d l7 ibib abs tot


L7   ANSWER 1 OF 13  CAPLUS  COPYRIGHT 2001 ACS
ACCESSION NUMBER:         1997:607316  CAPLUS
DOCUMENT NUMBER:          127:288626
TITLE:                    Development of genetically engineered oilseeds. From
                          molecular biology to agronomics
```

L2 ANSWER 9 OF 13 LIFESCI COPYRIGHT 2001 CSA
ACCESSION NUMBER: 1999:50320 LIFESCI
TITLE: RNAi and double-strand RNA
AUTHOR: Sharp, P.A.
CORPORATE SOURCE: Center for Cancer Research and Department of Biology, Massachusetts Institute of Technology, Cambridge, MA 02139-4307, USA; E-mail: sharppa@mit.edu
SOURCE: Genes & Development [Genes Dev.], (19990115) vol. 13, no. 2, pp. 139-141.
ISSN: 0890-9369.
DOCUMENT TYPE: Journal
TREATMENT CODE: General Review
FILE SEGMENT: N
LANGUAGE: English

AB Double-strand RNA (**dsRNA**) is a signal for gene-specific silencing of expression in a number of organisms. This phenomenon was demonstrated recently in Caenorhabditis elegans when **dsRNA** was injected into the worm and the corresponding gene products disappeared from both the somatic cells of the organism as well as in its F sub(1) progeny. This RNA interference, RNAi, has been generalized to many genes in C. elegans. ds-RNA can also suppress expression of specific genes in plants, a component of the phenomenon called **cosuppression**. Two recent reports document **dsRNA**-mediated interference with expression of specific genes in other organisms. Double-strand RNA produced gene-specific phenotypes in Trypanosoma brucei and, very recently, **dsRNA**-mediated interference was demonstrated in Drosophila. Thus, the RNAi phenomenon is likely to be a general mechanism for gene regulation and may be critical for many developmental and antiviral processes.

L2 ANSWER 10 OF 13 MEDLINE DUPLICATE 3
ACCESSION NUMBER: 1999061928 MEDLINE
DOCUMENT NUMBER: 99061928
TITLE: **Double-stranded RNA** induces mRNA degradation in Trypanosoma brucei.
AUTHOR: Ngo H; Tschudi C; Gull K; Ullu E
CORPORATE SOURCE: Department of Internal Medicine, Yale University School of Medicine, 333 Cedar Street, New Haven, CT 06520-8022, USA.
CONTRACT NUMBER: AI28798 (NIAID)
SOURCE: PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, (1998 Dec 8) 95 (25) 14687-92. Journal code: PV3. ISSN: 0027-8424.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals; Cancer Journals
ENTRY MONTH: 199903
ENTRY WEEK: 19990303

AB **Double-stranded RNA** (**dsRNA**) recently has been shown to give rise to genetic interference in Caenorhabditis elegans and also is likely to be the basis for phenotypic **cosuppression** in plants in certain instances. While constructing a plasmid vector for transfection of trypanosome cells, we serendipitously discovered that in vivo expression of **dsRNA** of the alpha-tubulin mRNA 5' untranslated region (5' UTR) led to multinucleated cells with striking morphological alterations and a specific block of cytokinesis. Transfection of synthetic alpha-tubulin 5' UTR **dsRNA**, but not of either strand individually, caused the same phenotype. On **dsRNA** transfection, tubulin mRNA, but not the corresponding pre-mRNA, was rapidly and specifically degraded, leading to a deficit of alpha-tubulin synthesis. The transfected cells were no longer capable of carrying out cytokinesis and eventually died. Analysis of cytoskeletal structures from these trypanosomes revealed defects in the microtubules of the flagellar axoneme and of the flagellar attachment zone, a complex cortical structure

TITLE: **Double-Stranded RNA** as a Template for Gene Silencing
AUTHOR: Bass, B.L.
CORPORATE SOURCE: Department of Biochemistry and Howard Hughes Medical Institute, University of Utah School of Medicine, Salt Lake City, UR 84132, USA; E-mail: bbass@howard.genetics.utah.edu
SOURCE: Cell, (20000428) vol. 101, no. 3, pp. 235-238. ISSN: 0092-8674.
DOCUMENT TYPE: Journal
TREATMENT CODE: General Review
FILE SEGMENT: G; N
LANGUAGE: English

AB When **double-stranded RNA (dsRNA)** corresponding to a sense and antisense sequence of an endogenous mRNA is introduced into a cell, in organisms ranging from trypanosomes to mice, the cognate mRNA is degraded and the gene is silenced. This type of posttranscriptional gene silencing (PTGS) was first discovered in C. elegans and is called RNA interference, or RNAi. RNAi shows many similarities to the PTGS that is sometimes observed when a transgene is introduced into a cell, and the processes seem to require some of the same gene products. If transgene-induced silencing of an endogenous gene, or **cosuppression**, also involves **dsRNA**, somehow the cell must make both sense and antisense copies of the transgene sequence. PTGS has captured the interest (and imagination) of geneticists and molecular biologists alike, and now the first clues about its mechanism will certainly bring the biochemists into the fold. As is often the case for biological processes, the first hint about the mechanism comes from the identification of molecules that appear to be reaction intermediates. In particular, several recent papers report the identification of small RNA molecules, 21-25 nucleotides in length (21- to 25-mers), that correspond to sense and antisense pieces of the **dsRNA** or transgene introduced into the cell.

L2 ANSWER 8 OF 13 BIOSIS COPYRIGHT 2001 BIOSIS
ACCESSION NUMBER: 2000:376595 BIOSIS
DOCUMENT NUMBER: PREV200000376595
TITLE: Developmentally and transgene regulated nuclear processing of primary transcripts of chalcone synthase A in petunia.
AUTHOR(S): Metzlaff, Michael (1); O'Dell, Michael; Hellens, Roger; Flavell, Richard B.
CORPORATE SOURCE: (1) Aventis CropScience NV, J. Plateaustraat 22, 9000, Gent Belgium
SOURCE: Plant Journal, (July, 2000) Vol. 23, No. 1, pp. 63-72. print. ISSN: 0960-7412.
DOCUMENT TYPE: Article
LANGUAGE: English
SUMMARY LANGUAGE: English

AB The introduction of chalcone synthase A transgenes into petunia plants can result in degradation of chalcone synthase A RNAs and loss of chalcone synthase, a process called **cosuppression** or post-transcriptional gene silencing. Here we show that the RNA degradation is associated with changes in premRNA processing, i.e. loss of tissue specificity in transcript cleavage patterns, accumulation of unspliced molecules, and use of template-specific secondary poly(A) sites. These changes can also be observed at a lower level in leaves but not flowers of nontransgenic petunias. Based on this, a model is presented of how transgenes may disturb the carefully evolved, developmentally controlled post-transcriptional regulation of chalcone synthase gene expression by influencing the survival rate of the endogenous and their own mRNA.